

**Delta Operations for Salmonids and Sturgeon (DOSS) Group**  
**Conference call: 04/26/11 at 9:00 a.m.**

**Objective:** Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmonids and green sturgeon. DOSS will coordinate the work of other technical teams. DOSS notes and advice can be found at: <http://swr.nmfs.noaa.gov/ocap/htm>

**DWR:** Andy Chu, Mike Ford, Angela Llaban, Tracy Pettit

**FWS:** Nick Hindman

**NMFS:** Barbara Rocco, Barb Byrne, Bruce Oppenheim, Garwin Yip, Jeff Stuart

**DFG:** Dan Kratville, Joe Johnson

**Reclamation:** Thuy Washburn, Josh Israel

**SWRCB, EPA:** not present

**Action Items:**

- 1) **2011 RPA adjustments:** Please take a week to review NMFS amendment to 2009 BiOp. Item is carried forward to next meeting.

**Agenda**

- 1) Fish monitoring data
- 2) Current operations
- 3) Real-time monitoring needs for next year
- 4) DOSS subgroup report on inflow to export ratio
- 5) Comments on recent amendment to actions within NMFS BiOp
- 6) Next meeting

**Fish Monitoring:** The following table presents the fish monitoring data from 4/17 to 4/24/11. No data were received from FWS before the conference call, except for Mossdale catch numbers.

Location	Chippis Is. Midwater Trawl	Sacramento Kodiak Trawl	Mossdale Kodiak Trawl	Beach Seines	Knights Landing RST	Tisdale Weir RST	Moulton Weir RST	Deer/Mill Creeks RST
Sample Date			4/18, 19, 21, 22, 23					
Total Catch			20					
(Ad-clips)			10 Purple Upper Caudal					
SH (ad-clip)			0					
SH (natural)			0					

<b>WR/LFR Avg. CPUE</b>								
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**Key:** FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = Steelhead; DS = Delta smelt; LFS = Longfin smelt; SPTL = Splittail.

Mossdale: The first efficiency test was conducted on Friday 4/22. DFG released ~5,000 dye-marked Chinook at the Mossdale boat ramp; 10 were recovered in the Friday sampling. Total cumulative Chinook since 4/4/11 is 25. Total for the week was 20.

Tisdale and KL traps saw an increase in hatchery (ad-clipped) fall-run starting on 4/19/11. These are most likely from the Coleman NFH fall-run production releases in Battle Creek.

**Salvage data (4/18–4/24/11):** For additional info:

<http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>

### **Chinook (non-clipped)**

Loss	CVP	SWP
Winter-run	0	0
Spring-run	364	3,342
Fall-run	28	120
Late fall-run	0	0

CVP: 40 fall run were salvaged for a loss of 28; no late-fall run or winter run were salvaged. 464 spring run were salvaged for a loss of 364. All were non-clipped.

SWP: 28 fall run were salvaged for loss of 120; no late-fall run. 757 spring run were salvaged for a loss of 3,342. We suspect that some of the spring run are actually fall run coming out of the San Joaquin River as they are identified only by size-at-date. If there are larger size salmon being observed at Mossdale, it would affect the spring-run numbers at the fish salvage facility.

Cumulative YTD totals: 4,360 non-clipped winter run; there numbers are dropping down to zero now. There are still winter run being caught at Chippis Island that are going out from the Delta. We did not receive a report for FWS so there are no numbers on trawl or beach seine data today.

**Steelhead salvage:** CVP: None caught since 4/18/11, SWP: No hatchery fish were salvaged, but there were non-clipped steelhead; 4 on 4/18, 4 on 4/22, 4 on the 23, and 12 on 4/24, for a total of 24 for the week.

Cumulative YTD salvage: 655 clipped (hatchery), and 404 non-clipped steelhead.

### **SWP & CVP OLDER JUVENILE\* CHINOOK LOSS & LOSS DENSITY 04/18/2011 through 04/24/2011**

Date	OLDER JUVENILE LOSS** (# fish)			Combined Older Juvenile Loss Density (fish/TAF)
	SWP	CVP	Combined	

04/18/2011	0.00	0.00	0.00	0.00
04/19/2011	0.00	0.00	0.00	0.00
04/20/2011	0.00	0.00	0.00	0.00
04/21/2011	0.00	0.00	0.00	0.00
04/22/2011	0.00	0.00	0.00	0.00
04/23/2011	0.00	0.00	0.00	0.00
04/24/2011	0.00	0.00	0.00	0.00

DWR-DES 4/25/2011

Preliminary, subject to revision

\*Older juveniles defined as all Chinook > the minimum winter run length (Delta Model)

\*\*Loss data obtained from DFG, Stockton

**Steelhead Loss Density:** Estimated loss density was below the 8.0 fish/TAF trigger.

Date	Loss/TAF
4/18:	1.43
4/19 to 4/21:	0.00
4/22:	1.16
4/23:	0.96
4/24:	3.07

**Coded wire tags:** DWR (Llaban) still has no news on the missing tags. There have been no more tags collected so we are still under the OMR trigger limit. There was a pulse of hatchery winter run that came in at the beginning of March so those missing tags could be from the winter-run hatchery fish.

Coleman NFH releases: There are a lot of fall-run Chinook coming down from the Coleman production release from a few weeks ago. There is a significant increase in ad-clipped Chinook in the monitoring stations (Tisdale & KL). There will be another production release (the third) the week on 4/28/11 of 3.7 million in Battle Creek; the second release was ~4 million. These fish are 25% marked with CWTs. There is one more release after this one.

Freemont Weir: A fish rescue is being conducted by DFG this week for adults and juveniles that are stranded as the water dropped in the Yolo Bypass. Juvenile salmon are being caught, stained with a blue dye, and released back into the Sacramento River. All of them should be fall-run juveniles so if any are caught/salvaged, they can be identified. Adult green sturgeon will be tagged with acoustical tags and released upstream of the weir in the Sacramento River. Some of these tagged sturgeon have already passed the Glenn Colusa Irrigation District diversion as of a few days ago. They were very big, some more than 200 lbs. That was a good sign that there were older, more mature adults in that population.

Feather River Hatchery: Releasing of 1.3 million spring-run Chinook in the Feather River this week. This is 50% of the hatchery production. The other half will be released in the SF Bay.

Sturgeon Report: DFG put out a new report based on the sturgeon report cards with good information on green and white sturgeon. A question was asked about whether the report indicates that the green sturgeon population is increasing; however, there were no data to confirm this. Only one green sturgeon has been salvaged at the pumps and there was a question about why this is happening. There are not enough data yet but DFG is working on it. DFG

identified another spawning site for green sturgeon on Turkey Beach upstream of Red Bluff Diversion Dam.

**Smelt working group (SWG) update:** For additional notes see FWS website at: <http://www.fws.gov/sfbaydelta/ocap/>

No Delta smelt have been salvaged at either facility; no larval smelt were caught. The 20-mm survey is in the field this week and will include samples from San Pablo Bay. The Trawl #5 survey will be in the field next week; it is the last of the season. Because of the high flows, positive OMR, and high Delta outflow, Delta smelt were at low risk of entrainment. Therefore, there were no recommendations. DFG reported there were no triggers met for longfin smelt.

#### Project Operations (4/12/11)

SWP		CVP	
Flows/Exports (cfs)			
Clifton Court Forebay	2,500 today; going to 5,000 on 4/27	Jones Pumping Plant	1,900
Outflow		American- Nimbus	9,000, down to 8,000 on 4/27
Total Delta Inflow	74,598	Sacramento-Keswick	9,000
		Stanislaus - Goodwin	2,500 down to 2,000 by 4/29
Feather - Oroville	12,000		
Sacramento River at Freeport	46,477		
San Joaquin at Vernalis	22,654		
OMR (daily)	+5,444		
OMR 5 day	+5,288		
OMR 14 day	+7,098		
Reservoir Storage (TAF)			
San Luis	1066	San Luis	965
		Shasta	4155
Folsom	731		
Oroville	3,263		
Delta Operations			
DCC	closed	X2 (km)	56
Outflow Index (cfs)	68,200		
Inflow diverted (%)	7.5		
Water Temp. (°F)	60.1		

**CVP:** Jones pumping plant will have a 10-hour outage on 4/27 at the fish facility for maintenance but will go back up to 1,900 cfs after the outage.

**SWP:** There has been an outage over the past few days; pumping will go up tomorrow (4/27).

**VAMP:** The San Joaquin River at Vernalis is projected to be below 21,750 cfs by Thursday (4/28). FWS (Brandes) wants to implement the 4:1 ratio the first 2 weeks of May and counsels

that we should go to lower exports the second half of May for the study. DOSS indicated the willingness to go with higher exports the first few weeks of May. Why would DOSS go with 4:1 for 1<sup>st</sup> 2 weeks and something else over the next 2 weeks? There is environmental water available for the state. The Yuba County water that was purchased could be used during the VAMP period to buffer or maintain a stable flow. DWR is looking at stable combined exports of about 5,000 cfs throughout the VAMP period.

It was suggested that DOSS not make a recommendation outside the regulatory intent of the BiOp; however, it was pointed out that although DOSS doesn't have authority for advice on this action (VAMP), it is appropriate for DOSS to discuss these issues according to the RPA.

There are 3 different fish studies going on during VAMP. The release times and export rates are still in flux. The best scenario would be to have a 10- to 14-day notice of stable flows. Normally, there are no steelhead releases in June because the biological relevance is very small (historically very few steelhead smolts emigrate in June); hatchery fish would be released Feb–May instead; may be only about 10% relevance. Releases done in June will be by DWR for the temporary barriers, but Reclamation (Israel) will use the same taggers and release schedules and monitoring aspects of inflow and exports, temp, etc., and same sample sizes. The temporary barrier releases could be done in May instead of in June. We have seen steelhead this year coming out later with the higher flows and lower temperatures. This is the same trend for fall-run Chinook.

The 6-year acoustic tag study: A question was raised about whether the release dates are shifting with VAMP release schedule. Reclamation (Israel) said they are and that Reclamation is tied with VAMP for the release dates and targeting the first week and middle of May for releases. Because of delayed releases, Reclamation is losing some biological relevance of the acoustic study this year. In March and April, we had only a single release, a few in May, and one will be in June.

#### **Subgroup meeting on NMFS requirement of the San Joaquin inflow to export ratio:**

The subgroup met last week and drafted some language but it is not yet ready to share this with this group. It did reach consensus on some issues and had a quick call this morning before the DOSS call. It agreed to report to the DOSS on the following:

- 1) **When does implementation of I/E ratio begin:** The decision should be triggered by the lower of the two thresholds; Vernalis flows of 21,750 cfs or a stage of 24.5 feet. If low flows at Vernalis are moving upward and crossing the threshold, unrestricted exports would be allowed until Vernalis drops below the lower threshold. This year, 21,750 cfs is the lowest threshold; whichever flow or stage threshold is hit first on the ascending limb, unrestricted exports will be allowed.
- 2) **Lag time for operational constraints:** If we can look back to see what is reported as of “yesterday”, if we’ve fallen below a threshold, we will export accordingly from 2 days out for the 4:1 ratio (time it takes to schedule a change in export pumping). Day 1 of the action will be 2 days from “today”. The action ends as soon as the flows rise across either threshold and a change will be scheduled for 2 days later (allows time for projects to adjust exports).

14 day of implementing I/E ratio: On the “15th day”, we would take the 14-day averages of inflow at Vernalis and divide by 4 to come up with combined exports; this should equal the ratio of operations.

Going <21,750 cfs: We will re-set the date to schedule the export increases. DWR is considering a progressive daily average for the first 14 days for scheduling exports. DOSS will begin with the progressive averages starting days after flow at Vernalis is confirmed to be less than 21,750 cfs. By using the progressive daily average, the projects are within the 4:1 ratio even if they don’t have a complete 14-day average.

Exports for the SWP will be Clifton Court inflow minus flows from the Byron Bethany Irrigation District (BBID). If the 4:1 ratio is controlling, the higher export portion will be potentially in June if smelt conditions are good.

The subgroup will continue working on this and draft implementing language. It will be good to present this at the annual review.

**Action Item:** Byrne will put language together and send to subgroup for review.

If subgroup and DOSS are comfortable with what was presented here, DOSS can “advise” that we adopt the procedure. DOSS needs to develop a proposal now because of the timing. Given the current relationship between stage and flow, DOSS would propose that implementation of the I/E ratio begin within 2 days of confirmation of flows. This year (2011), the I/E ratio is projected to begin on April 28 to implement a change within 2 days. The 4:1 implementation will be in effect within 3 days of meeting the trigger (1 day to report + 2 days to schedule).

**Real-time monitoring for next year (beginning on 10/1/11):** DOSS needs to document what fish monitoring data is necessary going into next year and provide this to DFG and DWR. It is important to clarify the information needed for specific triggers in the NMFS BiOp and the timeframe. Many of the data used by DOSS is in a new format not typically reported by either the fish facilities, DFG, or DWR (*e.g.* CWTs, loss density, steelhead loss, etc).

Reclamation biologists reported they were able to read the CWTs in real-time (have necessary equipment), but it is up to Ron Silva, Facility Manager, to authorize whether they can do it. DWR also needs a contract in place to work at the Reclamation facility; the division chief has been told and we’re waiting to renew a contract with DFG. DWR’s goal is to find and work with the correct resources to get this done. Reclamation requested that Silva and Brent Bridges (Reclamation) work with DWR; we need to start setting up something for the first week in June. What happens after the CWTs are picked up is the problem; tag reading is not being done as efficiently as we (Reclamation) would like. Reclamation needs to request that FWS (Stockton) read the CWTs as soon as they receive them from the fish facilities. This needs to be resolved within the next few weeks for contracting timing. Action: Reclamation and DWR will meet to discuss this more.

**Action Item:** NMFS (Oppenheim) will draft data needs and submit it to DOSS group for review.

**Action Item: Discuss 2011 Amendment:** Any response to the changes? No responses. Table until next week.

**DOSS advice to WOMT and NMFS:** Action IV.2.1: DOSS advises to implement the San Joaquin River inflow-to- export ratio (Action 4.2.1) in the following manner consistent with the NMFS 2009 OCAP BiOp:

The ratio in most years would begin on April 1 and be applied for the subsequent 61-day period to achieve the flow-to-export ratios on the San Joaquin River indicated in the BiOp. Because flows this year on the San Joaquin River were above the flood-monitoring stage on April 1, RPA Action IV.2.1, per its criteria, has not restricted exports since the beginning of April 2011; however, at this time, flows on the San Joaquin River are expected to soon drop below the threshold for unrestricted export levels (21,750 cfs or 24.5 feet river stage). DOSS advises that the inflow-to-export ratio start within 3 days of the Vernalis flows dropping below the 21,750 cfs flow threshold of the NMFS BiOp. This is projected to occur after Thursday, 4/28/11. A 14-day average of Vernalis flows will be used to measure compliance with the implementation of this action. Exact language and formulas for calculating the ratio will come from the DOSS subgroup later this week.

Action IV.2.3: The projects have been operating to an OMR limit of -5,000 cfs, and the reported loss densities over the past week have not exceeded any of the triggers of Action IV.2.3; therefore, DOSS advises to continue to operate to the OMR limit of -5,000 cfs.

**Leader for next week:** No one from NMFS will be available for the 5/3/11 conference call; therefore, someone will need to initiate the call. NMFS (Oppenheim) will send out request asking for a facilitator for next week. It is important to hold the meeting because of the VAMP and 4:1 issues. DWR (Llaban) will send out the data to the group.

A meeting was set up for Monday, 5/2/11, at 11:00 with a follow-up meeting on Tuesday, 5/3/11 at 9:00 a.m.

**Next Meeting:** Conference call on Monday, 5/2/11, 11:00 a.m.